CLAIMS

1.   Circuitry for generating a random key, comprising:

a random number generator for generating a random number implemented in an integrated circuit;

5   a memory internal to the integrated circuit for receiving and permanently storing the random number, said memory being accessible only internally to the integrated circuit.

2.   The circuitry of claim 1 and further comprising circuitry for detecting undesirable random numbers.

10   3.   The circuitry of claim 2 wherein said detecting circuitry comprises circuitry for detecting a ratio of "1"s and "0"s in said random number and comparing the ratio to a threshold.

4.   The circuitry of claim 1 and further comprising comparison circuitry for comparing the value stored in said memory to the random number.

15   5.   A mobile computing device comprising:

processing circuitry implemented in an integrated circuit;

a random key generator circuit implemented in said integrated circuit and coupled to said processing circuitry, comprising:

a random number generator for generating a random number;

20   a memory internal to the integrated circuit for receiving and permanently storing the random number, said memory being accessible only internally to the integrated circuit.

6.   The mobile computing device of claim 5 wherein said random key generator further comprises circuitry for detecting undesirable random numbers.

7.   The mobile computing device of claim 6 wherein said detecting circuitry comprises circuitry for detecting a ratio of "1"s and "0"s in said random number and comparing the ratio to a threshold.

8.   The mobile computing device of claim 6 wherein said random key generator circuit further comprises comparison circuitry for comparing the value stored in said memory to the random number.

9.   A method of generating a random key, comprising the steps of:

generating a random number in an integrated circuit;

permanently storing the random number in a memory on said integrated circuit, where said memory is accessible only internally to the integrated circuit.

10.   The method of claim 9 and further comprising the steps of identifying undesirable random numbers and regenerating a new random number in response thereto.